Minister's Report to Parents

Student Assessment Results for Nova Scotia

2004

Language Arts
Mathematics
Science

Provincial
National
International

Assessments

105-04029/

Minister's Report to Parents
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Nova Scotia

Dear Parents,

It is my pleasure to release the 2004 Minister's Report to Parents. This annual report is part of our commitment to provide parents with meaningful information about their child's learning and public school education in Nova Scotia.

This year's report contains assessment results for language arts, mathematics, and science for the 2003–2004 school year, at provincial, national, and international levels. While I'm pleased to see improvement in some subject areas, I am concerned that some students continue to struggle with the basics in reading, writing, and mathematics. These skills are the foundation for success and we need to do more, collectively, to help our students perform better.

That's why we invited hundreds of our partners in education to an education partners' forum in February 2005. We wanted their input and ideas on how to most effectively improve student learning and thus, help us develop the next plan for education. The key is to build on positive changes that have already been made through our Learning for Life plan, introduced in 2002.

But student success does not rest on the department's shoulders alone. Public education is a shared responsibility and we all—government, the community, school boards, schools, teachers, parents, and students—have a role to play in its success.

We know that some of our students are not performing as well as they should be. We also know that with our help, they can and will perform better. When students aren't performing well, we will continue to give them support to catch up. We will invest more dollars in the areas of greatest need, like math and literacy, and challenge our students to do better and better. We want students to leave Nova Scotia's public school system with the best possible preparation for their futures.

I would like to thank you for your support and your continued interest and involvement in your child's education. If all partners continue to work together, we will make a difference for the students of Nova Scotia. We will give our students every opportunity to reach their full potential.

Jamie Muir

Honourable Jamie Muir
Minister of Education

Background

The Minister's Report to Parents

An important part of the Department of Education's support for public school education is the Program of Learning Assessment for Nova Scotia (PLANS). PLANS provides reliable information about the performance of Nova Scotia's students and the public school system.

Provincial, national, and international assessment results help the department focus educational resources and develop meaningful educational policies. Results are used to monitor the progress of public school education and the impact of any actions and policies put in place.

Results also enable the department to identify areas of need and make strategic investments that have the greatest impact on student learning and achievement. The ultimate goal is to ensure students leave the public school system with the best possible preparation for their futures.

The Minister's Report to Parents: 2004, first published in 2001, is an annual report that provides parents with meaningful information on student achievement in provincial, national, and international assessments for language arts, mathematics, and science.

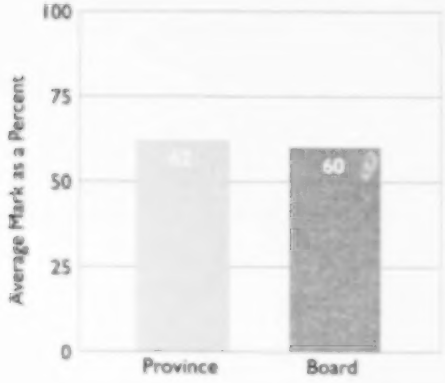
Understanding the Results

The results in this year's report are presented as percentages, with the exception of international assessments. International results are presented as scale scores, which provide a value for measuring student performance, where 500 is the international average. When comparing the results in this report, either from one year to the next, or from one jurisdiction to another, simply looking at the height of the bars in each graph may be misleading. What may look like an improvement or decline in the results may not be statistically significant. This is because the results used to produce the graphs are based on representative samples of students, with the exception of the Elementary Literacy Assessment, and therefore actually fall within certain statistical limits.

For example, a result of 62 percent in a chemistry examination may actually be a little higher or lower due to sampling error. In this example, let's consider that the sampling error is +/- 2 percent. This would mean that the actual results are somewhere between 60 percent and 64 percent. Therefore, if a board averaged 60 percent, and the provincial average was 62 percent, then there would be no statistical difference between the two results. For example, when interpreting the

graph below, it would be wrong to say that the students in the board performed below the students in the province as a whole. Despite looking as if they had a lower result on the graph, students in the board would have performed as well as students in the province. It is noted throughout this report when results are statistically significant.

Example Showing No Statistical Difference



Assessment Sources Used

Some assessments are not administered on an annual basis and thus no new information is available. In these cases, a brief summary of the results from a previous Minister's Report to Parents is provided. Three sources of information were used to prepare this report. A brief description of each follows.

Program of Learning Assessment for Nova Scotia (PLANS)

The Program of Learning Assessment for Nova Scotia (PLANS) includes provincial assessments for elementary, junior high, and senior high schools as well as national and international assessments. PLANS, when fully implemented, will administer assessments in mathematical and language literacy at each key stage (grades 3, 6, and 9) of the curriculum.

Currently, there are alternating assessments of mathematics in elementary and junior high schools and an elementary literacy assessment. As well, Nova Scotia Examinations (NSE) are administered to grade 12 students in English language arts, mathematics, and the sciences.

School Achievement Indicators Program (SAIP)

The School Achievement Indicators Program (SAIP) is comprised of assessment cycles in mathematics, reading and writing, and science. It began in 1993 and will conclude as a national assessment after results are reported for the science assessment administered during the 2003–2004 school year. There are no new results presented in this report.

This national assessment will be replaced by a new Pan-Canadian Assessment Program (PCAP). It will be administered to 13- and 15-year-old students beginning in 2007.

Programme for International Student Assessment (PISA)

The international assessment known as Programme for International Student Assessment (PISA) was first administered in 2000. At that time, reading was the major focus with mathematics and science taking a minor role. In 2003 PISA was administered in over 40 countries including Canada and mathematics was the major focus.

Organization of the School System

Nova Scotia's total public school population was 148 514 from primary to grade 12 during the 2003–2004 school year. The province had a teaching force of 9 588 and an overall student/teacher full-time equivalent (FTE) ratio of 16. There are seven regional Anglophone school boards and one provincial school board for Acadian/Francophone students, known as the Conseil scolaire acadien provincial (CSAP). About 97.2 percent of the students are enrolled in the seven Anglophone school boards, and about 2.8 percent of the students are enrolled in the CSAP. Overall, school enrolment is expected to continue to decrease over the next few years.

Children who are five years old on or before October 1 of the current school year are admitted to grade primary. Students must attend school until they are 16 years old.

School Board Funding

In the last number of years, funding for school boards has increased and student enrolments have declined as seen in the table below.

Year	Total	Funded Enrolment	Per Student
1997–98	$660 084 693	162 029	$4074
1998–99	$722 061 813	160 902	$4488
1999–00	$750 821 400	158 750	$4730
2000–01	$754 108 200	156 761	$4811
2001–02	$761 653 500	154 476	$4931
2002–03	$808 179 400	151 862	$5322
2003–04	$878 867 900	148 700	$5910
2004–05	$932 374 900	146 370	$6370

Note: Funding adjusted to remove the impact of Early Retirement Plan

Social Context

Nova Scotia has a population of 936 960 with a higher rural population than the Canadian average. The annual population growth rate is below one percent and immigration is low compared to the rest of Canada. About 10 percent of the population speaks both English and French, or French only. Among the total population 3.8 percent consists of other visible minorities. Unemployment rates in Nova Scotia are typically above the Canadian average.

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Summary of Assessment Results for Language Arts

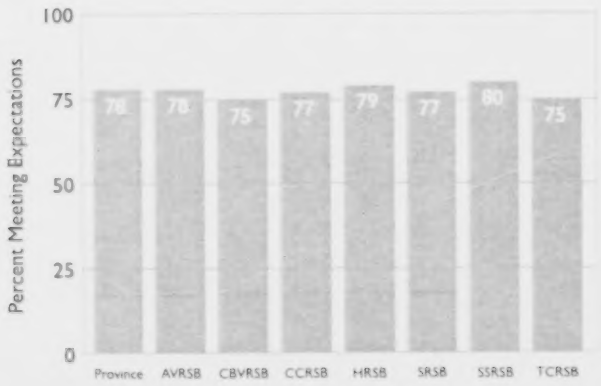
Provincial Assessment

Elementary Literacy Assessment

In October 2003, the English Elementary Literacy Assessment was administered to students in grade 6. Individual student results were given to parents. The purpose of the assessment was to identify students struggling with reading and/or writing. Once these students were identified a Literacy Support Plan was developed at the students' schools in collaboration with teachers and parents/guardians. Thus, students who do not achieve at the provincial level of expectation in reading and/or writing receive help to improve their literacy skills.

AVRSB—Annapolis Valley Regional School Board
CBVRSB—Cape Breton-Victoria Regional School Board
CCRSB—Chignecto-Central Regional School Board
CSAP—Conseil scolaire acadien provincial
HRSB—Halifax Regional School Board
SRSB—Strait Regional School Board
SSRSB—South Shore Regional School Board
TCRSB—Tri-County Regional School Board

2003 English Elementary Literacy Assessment Provincial and Board Results (Reading and Writing Combined)



The French Elementary Literacy Assessment was also administered in October 2003. The purpose and procedures for the assessment were the same as for the English assessment. However, the curriculum and therefore the assessment were not the same. No comparisons can be made with the English results. There were 80 percent of students in reading and 67 percent of students in writing that met expectations.

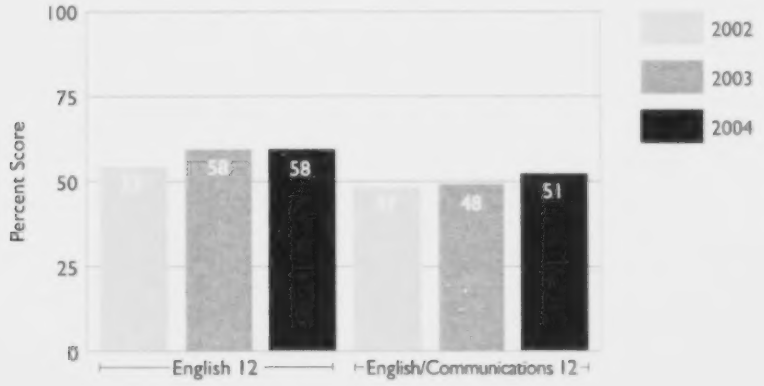
As with any new assessment initiative it will take time to determine trends in student performance.

English 12 and English/Communications 12 Examinations

Beginning in January 2000, Nova Scotia Examinations (NSE) were administered to grade 12 students completing their English 12 and English/Communications 12 courses.

The pass mark for NSE is 50 percent. The examinations count as 30 percent of a student's final course mark. Class marks comprise the other 70 percent. The results presented below are for the examination only. The graph shows the provincial results in both courses over the last three school years.

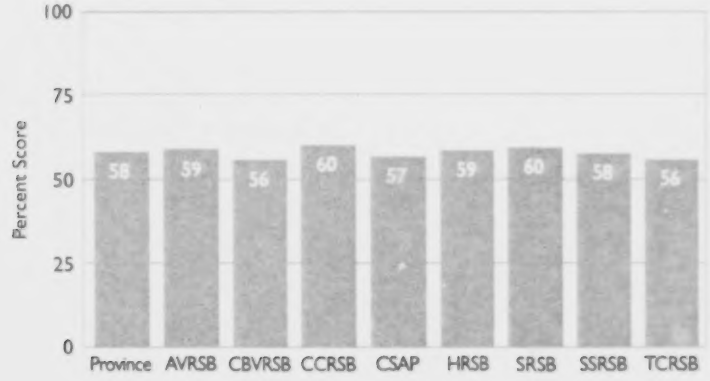
Grade 12 English Language Arts Examinations



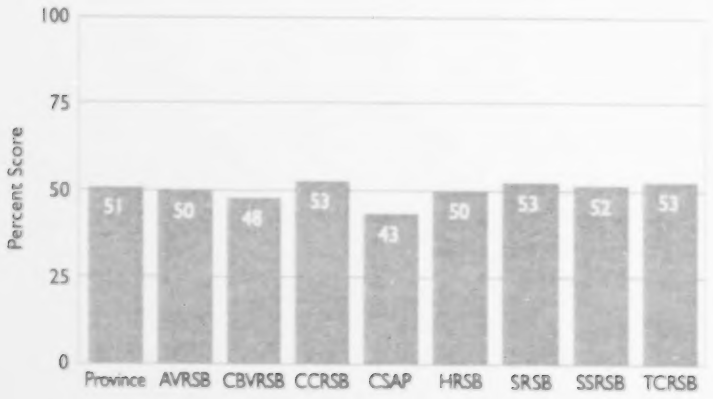
The results for English 12 are the same as those presented last year. Results for English/Communications 12 show significant improvement in 2004.

The following two graphs show the school board results for English 12 and English/Communications 12 examinations written in January and June 2004.

English 12 Provincial and Board Results



English/Communications 12 Provincial and Board Results



Results for each board are compared with the results for the province as a whole. There is no statistical significance observed in the results of each school board in comparison to the provincial results for English 12. For English/Communications 12 there is a statistical difference in the results for CSAP compared to the province as a whole (see Understanding the Results, pages v–vi).

National Assessment

SAIP

There is no new information to report on this national assessment. The SAIP writing assessment was reported in last year's Minister's Report to Parents and the assessment will not be conducted again. The first administration of the new national assessment, Pan-Canadian Assessment Program (PCAP), is scheduled for 2007. PCAP will assess students in reading.

The following graph summarizes the results for the last time the writing assessment was administered.

Summary of Previous Results

Year	Assessment	Age	Results
2002	Writing	13	Below the national average (French and English)
		16	Below the national average (French and English)

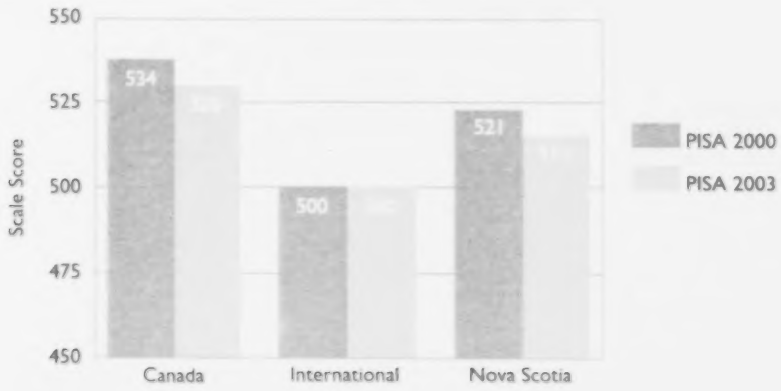
International Assessment

PISA

The international assessment, PISA, was administered for the first time in the spring of 2000. Fifteen-year-old students in Nova Scotia participated in a reading assessment, along with students in other provinces of Canada and in 31 other countries. Canadian territories did not participate in the assessment. Canada was one of the top ranked countries in the assessment. PISA was readministered in the spring of 2003 with over 40 countries participating. The results for reading are presented in the graph below.

In both the 2000 and 2003 assessment Nova Scotia did significantly better than the majority of participating countries. However, Nova Scotia did not perform as well as Canada as a whole.

PISA Results



Summary of Assessment Results for Mathematics

Provincial Assessment

Elementary Mathematics Program Assessment

The Elementary Mathematics Program Assessment was administered to students in grade 5 in 2001 and 2003. The results were reported in last year's Minister's Report to Parents. Results in both years, with provincial averages of 42 percent in 2001 and 50 percent in 2003, were not acceptable and resulted in the province initiating a mathematics strategy to improve student learning.

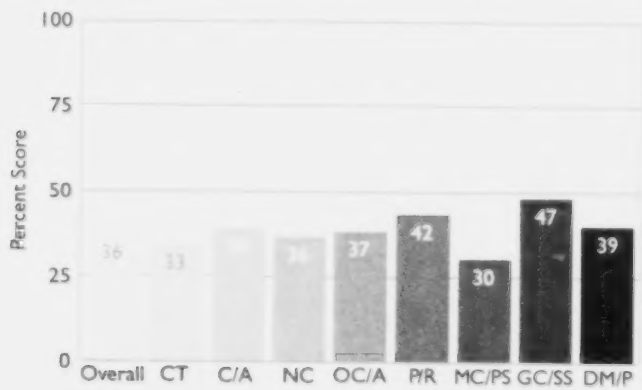
Junior High Mathematics

In Spring 2004, the second Junior High Mathematics Program Assessment was conducted in Anglophone grade 8 classrooms throughout the province. The questions in the assessment were based on the province's mathematics curriculum for grades 6, 7, and 8. The assessment was conducted to determine the status of the implementation of the junior high mathematics curriculum. No individual student reports are given for this program assessment.

The assessment provided information about the major parts of the mathematics curriculum including Computational Tasks (CT), Concepts and Application (C/A), Number Concepts (NC), Operational Concepts and Applications (OC/A), Patterns and Relationships (P/R), Measurement Concepts and Problem Solving (MC/PS), Geometry Concepts and Spacial Sense (GC/SS), and Data Management and Probability (DM/P).

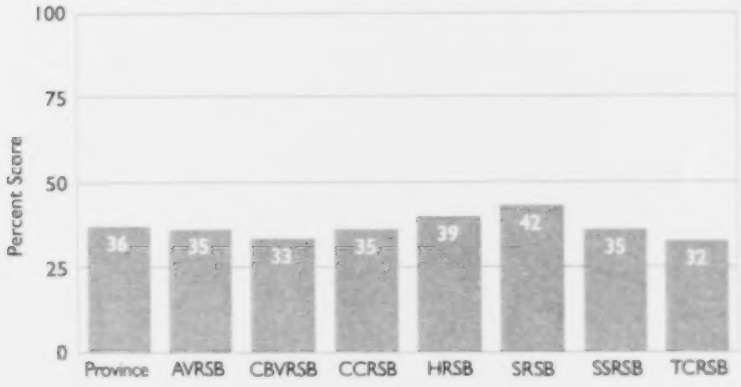
The graph below compares the 2004 results for the province on each of the major parts of the curriculum.

Junior High Mathematics Program Assessment Results 2004



The graph below shows the performance of each school board in relation to the province in the 2004 assessment.

Junior High Math Program Assessment 2004



Overall, student performance in the Junior High Mathematics Program Assessment was very weak, and certainly much below the expectations of the curriculum. Program assessment results are used by the Department of Education to focus its resources in the areas of the curriculum with the greatest need.

Senior High Mathematics

The NSE in Mathematics 12 and Advanced Mathematics 12 were administered for the first time in the 2003–2004 school year. During this first administration teachers were permitted to omit questions on topics that had not been covered in class. The department did not collect a sample of student booklets for central marking and reporting. Therefore, there are no results to report for the 2003-2004 examinations in the grade 12 math courses.

In the 2004–2005 school year this procedure of omitting questions will be discontinued. Students across the province will be writing the same examination. The department will mark a sample of these examinations and the results will be reported in the next Minister's Report to Parents.

National Assessment

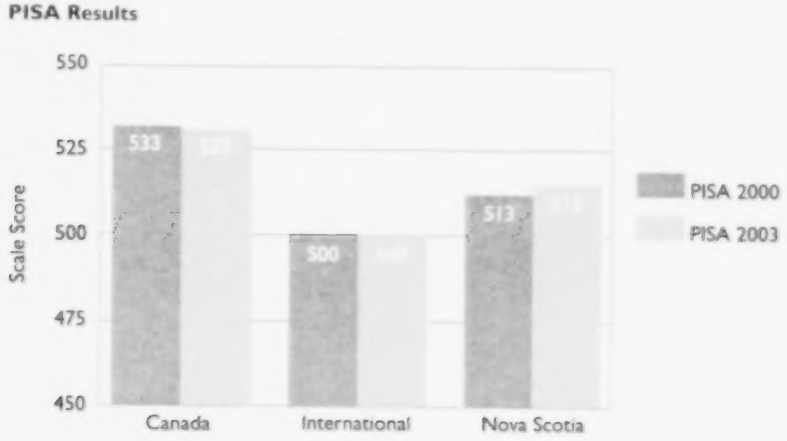
SAIP

There are no plans to administer another SAIP mathematics assessment. SAIP will be replaced by a new national assessment; Pan-Canadian Assessment Program (PCAP).

International Assessment

PISA

The PISA mathematics results for 2000 and 2003 are presented below. Nova Scotia students performed above the international average, ahead of many countries including Sweden, United States, Ireland, and Germany. However, Nova Scotia students performed below the Canadian average.



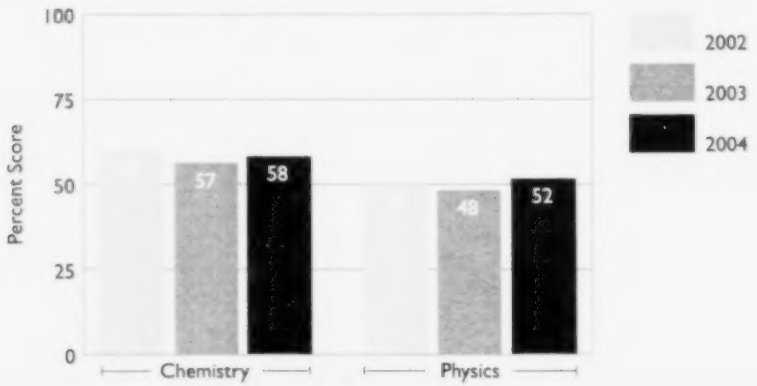
Summary of Assessment Results for Science

Provincial Assessment

NSE are administered each year in the sciences to grade 12 Anglophone students completing courses at the end of January and June. Fifty percent is the requirement for students to pass each examination.

The graph that follows gives the results for Chemistry 12 and Physics 12 examinations.

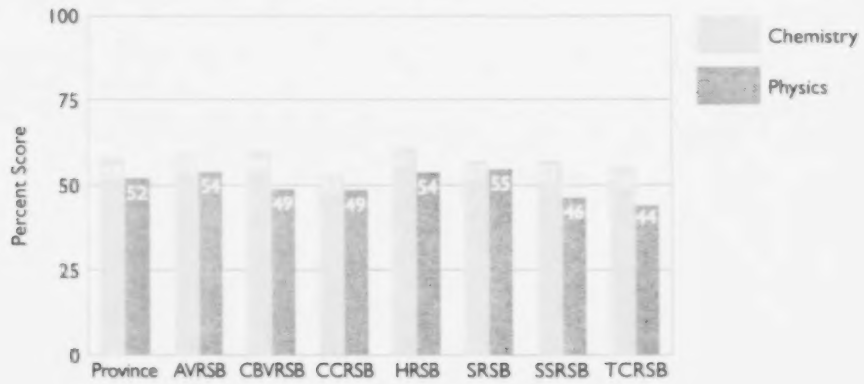
Grade 12 Science Examinations



The provincial results in chemistry and physics have improved since their first administration in 2000 and 2001. More students are achieving higher average marks. As well, the pass rates for both examinations have improved. The improvement in physics is statistically significant.

The following graph presents the 2004 results in chemistry and physics for each school board.

Grade 12 Science Examinations Board Results



National Assessment

SAIP

The SAIP science assessment was administered to 13- and 16-year-old Nova Scotia students in April 1999 and 2004. There are no new results to report in this edition of the Minister's Report to Parents. The results of the 2004 assessment will be released in the spring of 2005.

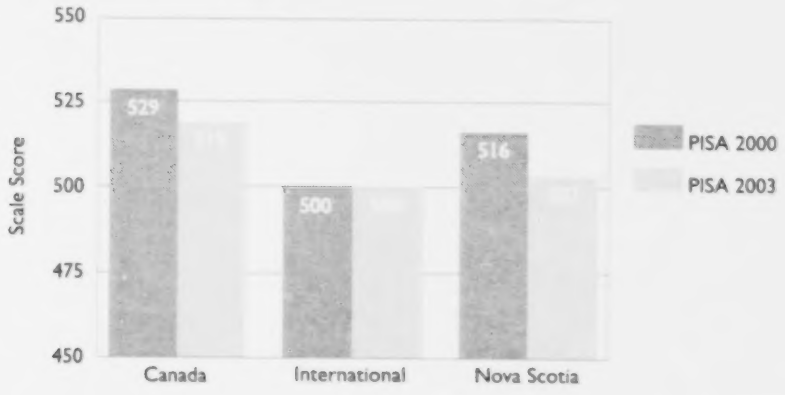
International Assessment

PISA

Nova Scotia 15-year-olds have participated in both the 2000 and 2003 administrations of PISA. Nova Scotia performed better than the majority of countries in both years. The science portion of the assessment has had a minor role in both administrations. In 2006 science will be the major focus of this international assessment.

The results of the assessment are presented below.

Summary of Previous Results



Nova Scotia students performed above the international average, and below the Canadian average. In 2000 no significant difference was observed between the achievement of boys and girls. However, in 2003 the performance of the boys was better than that of the girls.

Moving Forward with Learning for Life

Since September 2002, our Learning for Life plan has been guiding strategic investments in Nova Scotia classrooms. The plan focusses on supporting students in the early years and ensuring they develop a solid foundation in the basics. It also includes more support for quality teaching, measures for more accountability, and initiatives to inform and involve parents in meaningful ways.

With the help of teachers, school boards, parents, and others, Learning for Life is now well underway and will continue to improve our students' learning over time. Some highlights of Learning for Life achievements to date, and actions soon to be implemented, include the following:

> Smaller class sizes are helping our youngest students get the attention they need. Class sizes are now capped at 25 students in grades primary and 1, and the initiative is scheduled to expand to grade 2 in September 2005 and to grade 3 the following year.

> Students are spending more class time on mathematics, reading, and writing to get a stronger foundation in the basics. Under our Time to Learn strategy, students in grades 7 and 8 now get an hour every day for language arts and an hour every day for mathematics.

> Elementary students now have more resources to develop strong writing skills. Each September every grade 4 student gets a *Writers in Action* handbook for use in class and at home to check grammar and polish their written work. More than 30,000 students in grades 4–6 now have their own handbooks and Writers in Action/Écrivains à l'oeuvre will expand to grade 7 in September 2005.

> Junior high students are getting more support for their development as readers. With the introduction of Active Readers/Lecteurs actifs in 2002–03, more money has been invested in new reading books for grades 7–9 classrooms and more resources for teachers. A comprehensive new classroom resource for grades 7–9, *Active Readers Assessment Resource for Young Adolescents*, will be introduced in 2005.

> A new investment of $1 million in 2004–05 has helped schools to provide increased support for students who are struggling with reading and writing. This investment will help students get the support they need to catch up as they go through junior high school.

- Teachers are getting more support to help students improve their math skills. Every school (English boards), grades primary–9, now has at least one school-based math leader to support math teachers in their school. The department continues to provide professional development for principals, teachers, and math mentors.

- Boards have developed action plans and targets to increase student achievement in mathematics. With the funding provided by the department for mathematics, boards have been able to provide leadership and dedicated support for mathematics, primary–9.

- New textbooks, matched to the Atlantic Canada mathematics curriculum, are being provided over a period of several years for grades primary–9. New textbooks and teacher resources have been provided for grade 3; grades 4 and 9 will receive new textbooks and teacher resources in 2005–06.

- Parents are getting help to support their children's reading, writing, and mathematics learning. Information, including pamphlets and home activity resources, is being distributed to help them understand and enhance their children's learning.

Students are already benefiting from these initiatives. Over time, these actions will help all of our students show improvement in their assessment results. It will not happen overnight. It will take time and the continued commitment of everyone in our education system.

A complete copy of our Learning for Life plan is available at **EDnet.ns.ca**.

Conclusion

This fourth annual Minister's Report to Parents presents some new results from student assessments conducted in the 2003–2004 school year.

These results will guide us—parents, teachers, school boards, the Department of Education, and the school community—in our efforts to improve our students' achievements.

The actions in our Learning for Life plan are well underway. We are confident that, over time, these measures will help all of our students reach their full potential.

Our Learning for Life plan is available at **EDnet.ns.ca**, and information on the Program of Learning Assessment for Nova Scotia is available at **plans.EDnet.ns.ca**.

For more information, please contact:

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